

Training : Female Health Workers.

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FEMALE HEALTH WORKERS IN KARNATAKA : AN ASSESSMENT OF THEIR TRAINING

Draft Report

By

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Introduction

Health status of people in India has shown remarkable improvements during the last two decades. The Crude Death Rate (CDR), Infant Mortality Rate (IMR) and Crude Birth Rate (CBR) have shown sharp fall and key health indicator 'Life Expectation at Birth' which was about 42 in early Fifties has crossed 60 years in the early Nineties. Wide differentials across states in India, however, have persisted throughout suggesting the need to take corrective measures to bring in much desired equity in health to reach the goal 'Health For All by 2000' India has committed at Alma-Ata in 1978 (See Table 1 for differentials).

The data presented in Table 1 clearly brings out the fact that Southern States - Kerala, Tamil Nadu, Karnataka and Andhra Pradesh have shown relatively better performance as compared to Hindi speaking BIMARU States - Bihar, Madhya Pradesh, Rajasthan, Uttar Pradesh and Orissa.

Wide differentials within state by rural-urban residence, gender and social class exist across the districts. The Human Development Report 1999 - Karnataka provides CDR, CBR and Life expectancy at Birth for all the districts that reveal the differentials. IMR another sensitive health indicator shows that Dakshina Kannada reported the lowest IMR (27) in the state while Gulbarga, Bijapur, Bellary had IMR about 3 times higher than Dakshina Kannada district. There is other strong evidence to support the IMR estimates - institutional deliveries in Dakshina Kannada accounted for 77 percent while in Gulbarga it was only about 27.9 percent suggesting the strong negative association between IMR and institutional deliveries - safer deliveries.

TABLE 1 : HEALTH SITUATION IN INDIA AND SELECTED STATES

State	IMR 1996			CDR 1996			Maternal mortality ratio 1986	Sex Ratio 1991	CBR 1996
	R	U	T	R	U	T			
India	77	46	72	9.7	6.5	9.0	580	927	27.5
AP	73	38	65	9.2	5.9	8.4	394	972	22.8
Karnataka	63	25	53	8.6	5.4	7.6	439	960	23.0
Kerala	13	16	14	6.3	6.0	6.2	247	1036	18.0
Tamil Nadu	60	39	53	8.7	6.6	8.0	372	974	19.5
Uttar Pradesh	88	67	85	10.7	8.2	10.3	920	879	34.0
Rajasthan	90	60	85	9.6	7.1	9.1	627	910	32.4
MP	102	61	97	11.8	7.6	11.1	507	931	32.3
Bihar	73	54	71	10.6	6.9	10.2	813	911	32.1
Orissa	99	65	96	11.2	7.5	10.8	844	971	27.0
Maharashtra	58	31	48	8.7	5.4	7.4	439	934	23.4
Gujarat	68	46	61	8.3	6.2	7.6	373	934	25.7

Source: 1) Family Welfare Programme in India, 1996-97, Government of India.
2) Mari Bhat P.N., 1995.

The latest data-set (1998-1999) collected in National Family Health Survey and Reproductive and Child Health Survey (NFHS II and RCH) provides valuable insights for effective policy interventions to reduce the disparities across districts by rural-urban residence, social class and gender. Findings from both the surveys suggest that the out reach services of maternal and child health hold the key to bridge the differentials and these services are to be delivered by Female Health Workers popularly known as Auxiliary Nurse Midwives (ANMs) and Lady Health Visitors (LHVs).

The Present Study

The present study is an attempt to examine the role of these grass root level female health workers and adequacy of their training to discharge their

responsibilities satisfactorily that can help to reduce considerably the disparities observed across districts.

Objectives

Taking into consideration the major midwifery responsibilities assigned to the ANMs and LHVs after a rigorous foundation training of 18 months the study proposes to achieve the following objectives.

1. To examine the knowledge of ANMs regarding the Ante-Natal care service and its delivery to pregnant woman.
2. To assess their knowledge of identifying the high-risk pregnancies and ensuring safe delivery that will help to reduce maternal mortality.
3. To examine the knowledge of supplementary nutrition to be advised and supplied to all pregnant women to reduce malnutrition.
4. To examine their knowledge of identifying high risk infants and measures to be taken to ensure their survival to reduce IMR further.
5. To identify inadequacies in the training of ANMs/LHVs if any, and suggest corrective measures.

The Sample

The study was conducted in three districts of Karnataka that differ widely in indicators relevant to reduce IMR and MMR. These indicators were drawn from the RCH Survey (First Phase - Kanbargi et.al., 1998). They are

- 1) Percent women who received full Ante-natal care package (At least 3 ANC visits + 2TT injections and 100 IFA Tablets)
- 2) Percent institutional deliveries.
- 3) Percent children in 12-23 months age who did not receive any immunization.
- 4) Percent women who had knowledge of all modern contraceptive method.

Based on these criteria following three districts were selected.

TABLE 2 : SELECTION OF THE SAMPLE DISTRICTS

	District/State	Full ANC (percent)	Institutional deliveries (percent)	Children not immunised (percent)	Family Planning knowledge of all modern methods Percent
1	Udupi (DK)	78.9	76.6	0.5	70.7
2	Tumkur	68.7	48.4	0.5	40.8
3	Gulbarga	21.2	27.9	31.1	27.2
	State	52.2	52.4	8.3	46.1

Source: Rapid Household Survey RCH, 1998, Kanbargi et. al.

The three Districts selected differed maximally in several other variables, also. For example the percent girls marrying before 18 years - legally approved age was highest in Gulbarga about 59 percent, 29 percent in Tumkur and only 5 per cent in Udupi (which was part of Dakshina Kannada then. We selected Udupi District based on the data of Dakshina Kannada district as data for Udupi are yet to be made available). The observed early marriage and its impact on CBR is clearly reflected in these districts (Gulbarga 32, Tumkur 24.7 and 21.4 in Udupi).

The three selected districts - one highly advanced - Udupi, one with medium progress - Tumkur and one backward - Gulbarga in terms of demography and health would be able to provide insights sought in the functioning of the ANMs and LHV's in the state. For data collection 8 Taluks 22 PHCs and 87 sub-centres were selected randomly. The following table provides these details.

TABLE 3 : THE STUDY AREA

District	Taluks	PHCs	SC (ANMs)
Udupi	1) Udupi 2) Kundapur	8	26
Tumkur	i) Gubbi ii) Madhugiri iii) Kunigal	6	41
Gulbarga	i) Afzalpur ii) Gulbarga iii) Chitapur	8	20
Total	8 Taluks	22 PHCs	87 ANMs

Methodology

The relevant data was collected from all ANMs available in the selected PHC/Sub-Centres by employing survey methodology. A standardised questionnaire was constructed for administering to each ANM/LHV in the selected PHC/Sub-centre. The administering of the questionnaire was preceded by a brief introduction about the survey and assurance that the information collected will be kept confidential and used only for research purpose. In PHC we met the medical officer (MO) and other staff present and briefed them about the study. We assured all that they will not be harassed by Health Department or any authorities for sharing their honest views on the functioning of the Health Care Services.

There were focus group discussions to get insights in the functioning of the Institutions that provided valuable information. This information is exploited to supplement the hard data collected in the survey.

Each questionnaire administered to ANMs/LHVs took over an hour. The interviews were abrupted often when many ANMs broke down who were to be consoled to start the interview again. The respondents reported that it is first time in their entire service someone is enquiring about their problems and welfare. When they were asked whether they would be happy if their daughter - (those having one) was offered ANMs job, it was revealing that most of them reported that they do not mind if their daughter goes for agricultural labour but they don't want them to become an ANM like their mother. It indicated harsh working environment they are situated in, their frustration and helplessness.

Data and Analysis

The brief profile presented in Table 4 suggest that most of the Female Health Workers are currently married, have at least 10 years of schooling and in their middle ages with long experience. As there are limited opportunities of advancement in the career they feel dejected struck with the same work for years. Those who were on the verge of retirement were eagerly looking forward for the day to free themselves and lead a relaxed life.

TABLE 4: FEMALE HEALTH WORKERS IN THE STUDY AREA :
A PROFILE (87 ANMs and LHVs)

	Variable	Frequency	Per cent
1	Age (years)		
	Below 40	31	35.6
	40 - 49	33	37.9
	50 - 58	23	26.4
2	Marital Status		
	Single	04	4.6
	Currently Married	77	88.5
	Widowed/Divorced	06	6.9
3	No. of living children		
	0	11	13.3
	1	17	20.5
	2	41	49.4
	3+	14	16.9
4	Education		
	Below SSLC	18	20.7
	SSLC Pass	54	62.1
	PUC	11	12.6
	PUC +	04	4.6
5	Length of Service (in years)		
	Less than 5	9	10.3
	5 - 14	22	25.3
	15 - 29	39	44.8
	30 +	17	19.5

One of the major problems faced by the respondents was shortage of housing - only 40 percent of them had housing facility provided by the Government, whereas 23 per cent of ANMs were residing in rented houses in the sub-centre villages. Another 23 percent were in a rented house in the sub-centre village and the rest 37 percent were commuting to their place of work that

required about an hour. Udupi had an excellent net work of public transport with very good road that was found to be a very important factor to improve accessibility to health care services whereas Gulbarga had bad roads or no roads and poor public transport that badly affected easy accessibility. Tumkur can be placed in between these two districts with some area with good roads - Kunigal section whereas Madhugiri was having serious problem of roads and public transport. It would be of interest to mention here that during our visit to observe an ANC camp at a sub-centre village in Gulbarga we had to leave our car at a point and hire a Land Rover jeep to reach the Sub-Centre as the road was full of boulders and ditches which only jeep could negotiate with great difficulty. To cover a distance of 15 kilometers it took an hour at high cost.

Lady Health Visitors have to supervise the work of ANMs. In the study area we could get only 10 LHVs who had to cover on an average 40 villages in addition to their administrative work of compiling service statistics from each ANM on maternity, immunisation, etc. The fact as reported by both LHVs and ANMs is that supervision/work monitoring in the villages has almost ceased to exist. Many senior ANMs recalled that when they joined service they had to cover larger areas – population but they used to enjoy the work. There was a team spirit, co-operation and guidance from M.O and DHO. Work was taken very seriously. The Medical Officers provided home visits to sterilised cases for follow-up services. Deliveries were supervised and post natal care then was good. Now hardly anybody bothers about supervision and monitoring. ANMs feel lonely and helpless in the job as there is neither any help nor guidance and no supervision but if anything goes wrong they will be held responsible. The information collected from ANMs show that exceptionally large number of villages 11 to 18 villages were to be covered by 13 ANMs in Tumkur. Whereas in Udupi and Gulbarga despite vacancies that add burden to ANMs work they were found to be covering about 3 – 4 villages as size of population is large. As over half of the ANMs were natives of the same district they were quite familiar with sociology and culture of the area. While more villages add only to travelling time, size of the population, average number of couples to be served in RCH seem to be well within manageable limits of ANMs with very few exceptions.

The Foundation Course

The female health workers have to complete the foundation course specially designed for them to be eligible for consideration for the job. But some had 2 years training while over 80 percent had completed 18 months course at different District Head Quarters. Surprisingly it was found that there was a long time gap before they got the job. About 20 percent had joined after 3 - 4 years of their completion of the course and they took considerable time to refresh their training skills they had almost forgotten. Indeed, 6 ANMs had joined service after 5 years gap. In addition to the foundation course LHV's have to undergo another 6 months training to become LHV.

They were asked to assess the quality of their foundation training course in terms of (a) Curriculum (b) Duration (c) Regularity of Faculty (d) Quality of training (e) Practical training in hospital and (f) Practical training in the field. Their response was classified in 3 categories. The distribution of responses are reported below.

TABLE 5 : ASSESSMENT OF THE FOUNDATION TRAINING BY THE TRAINEES (PERCENT)

		Good	Fair	Poor	Can't say
1	Curriculum	78.2	15.0	2.3	4.5
2	Duration	34.5	63.2	--	2.3
3	Regularity of Faculty	70.0	25.3	2.3	2.3
4	Quality of training	24.1	64.4	8.0	3.4
5	Practicals in hospital	19.5	57.5	19.5	3.4
6	Practical in field	25.3	59.8	11.5	3.4

It is to be noted that 18 months duration is divided as 12 months theory and 6 months practicals in hospital and field. The majority of ANMs (63.2 percent) considered that duration was too short as they had to complete 10 theory papers. It is also reflected in the assessment of practicals in hospital as 57.5 percent reported that on job training was too short to master the art of good midwifery. Almost 60 percent felt that the field training that forms the most important component of their job was inadequate.

Majority of the ANMs opined that the curriculum is good but heavily biased towards theory whereas most important for their job is field work where they have to manage themselves with midwifery that put heavy responsibility. Communication skills which they need most in their field work was found to be lacking. It seems there is an assumption, that all ANMs have that skill.

During discussion with ANMs we asked how confident they were when they conducted the first delivery of their career. Majority response was they were very shaky. Few were fortunate to have a LHV who was good to instill confidence in them giving guidance in the conduct of delivery that went a long way in building their confidence. But many were not that fortunate but could manage the situation without any serious problem.

How the training received several years back is relevant now? Several respondents mentioned that except midwifery hardly anything is relevant. AIDS, RCH, Target free approach are all new and are relevant now. More skills are required for day-to-day work and in recording them properly in the registers provided.

Section I

In this section we have tried to review the training programmes that respondents have completed and how they perceived their utility in their day-to-day work. The major programme in this regard was the Child Survival and Safe Motherhood training followed by several other short term skill knowledge enhancing programmes.

Child Survival and Safe Motherhood (CSSM) Training

Reduction in maternal and child mortality was highlighted in the National Health Policy 1983. The sustained high levels of immunisation programme that increased contacts of female health workers with women and children demonstrated that about 2million children were saved during 1984-92 (the difference in child mortality rates of 1984-92 which was monitored). It was

followed by Universal Immunisation Programme that envisaged that every child would be protected by all the preventable killer diseases of children

In order to accelerate the declining trends observed in child mortality 'Child Survival and Safe Motherhood' programme was launched in August 1992. It was fine tuning of the earlier programme with emphasis on quality and outreach. It is very relevant for this study to consider the objectives of CSSM programme and examine the ANM/LHV training impact on their performance. The CSSM had set the following goals:

1. By 1995
 - a) Eliminate neonatal tetanus.
 - b) Reduction in Measles by 90 percent, deaths by 95 percent.
2. By 2000
 - a) Elimination of Poliomyelitis.
 - b) Reduction in diarrhoea deaths by 70 percent.
 - c) Reduction in ARI deaths by 40 percent.
 - d) Reduction in maternal mortality to 2 per 1000 deliveries.
 - e) Reduction in IMR to 60 or less per 1000 live births.
 - f) Reduction in under 5 mortality to 10 per 1000 children under 5 years of age.
 - g) Reduction of perinatal mortality to 35 per 1000 births.

In order to equip the Female Health Workers for the huge programme massive training programmes were launched in the states. An earlier study conducted in Karnataka that covered Channapatna and Hoskote Taluks (all PHCs and Sub centres) found that CSSM training given to ANMs/LHVs had significantly improved their midwifery skills and improved immunisation in the area resulting in reduction in IMR (Kanbargi, 1997).

In the study area only 60 percent of the respondents had undergone CSSM training. The duration of training varied between 3 days to 21 days at different locations where the training was imparted. It was not possible for us to verify the wide ranging duration and the reasons for it. However, most of the

respondents expressed their appreciation for providing training that refreshed their memory. There is hardly any continuing education programme for them. An important fact that came out during the study was how CSSM changed some age old practices that were routinely followed. For instance, babies were given bath soon after birth that often led to complications. The CSSM training has changed it. Now baby is kept warm for a day before giving bath. This practice may reduce considerably the incidence of diseases peculiar to childhood. The training also, as reported by all those trained, enhanced their knowledge on ANC, PNC and midwifery skills many of whom had learnt 20-25 years back. The five cleans or Pancha Shuchitwa was very much valuable learning. Some of the respondents expressed their happiness that CSSM training not only improved their skills but was accompanied by a booklet and a Disposable Dai Kit (DDK). The booklet which should be given to every ANM/LHV as they reported it has proved invaluable for them for all time. (Unfortunately the Research Team could not see the booklet).

The respondents were asked about other skill based short term special training programmes that are imparted. There does not seem to be any systematic approach in organising these training programmes nor there seem to be any compulsion that say those who have put in 20 years of service should have some minimum number of training programmes. As one ANM (very senior) told us that often they do not know that their colleague from other sub-centre had gone for a training programme about which MO had not even informed others. It was only after her return they learnt. This aspect, it is hoped, is covered by other study by Dr Mehta and Dr Shivram.

We had listed 10 important training programmes to check how many of them were attended by the respondents. They were training programme pertaining to Malaria, Cataract, Tuberculosis, Family Planning Target Free Approach, RCH, Leprosy, AIDS, IUD, MPW, MTP and an open ended 'others'. Others category included IPP and continuing education programmes that were of relatively longer duration were appreciated by the respondents. The ANMs opined that the programmes were broad based and more practical. The response and ratings recorded are presented below:

TABLE 6 : TRAINING PROGRAMMES AND THEIR ASSESSMENT

Training	No. of ANMs trained	Percent	Rating		
			Very good	Some what useful	Not useful
Malaria	15	17.2	26.6	60.0	13.3
Cataract	60	69.0	25.0	41.7	33.3
T.B	23	26.5	17.4	65.2	17.4
Target free	59	67.8	16.9	59.3	23.8
RCH	37	42.5	32.4	54.1	13.5
Leprosy	67	77.0	19.4	55.2	25.4
AIDS	39	44.8	41.0	35.9	23.1
IUD	18	20.7	61.0	33.3	5.6
MPW	20	23.0	50.0	45.0	5.0
MTP	04	4.6	100.0	--	--
Others	45	51.0	46.7	48.9	4.4

The rating and percent trained for different health programmes reveal some interesting facets. Even during our discussion the findings in the table were repeated. Short term programmes particularly one-day training was disliked by most of the respondents. It was reported in all sub-centres that the faculty would arrive, generally, late and by the time the programme starts it is time for lunch and post lunch session - after heavy lunch is not very conducive for learning. The administration might have to confront with several problems in encouraging training courses lasting for at least a week. Given the large number of vacancies in the sub-centres, withdrawing ANMs for training for a week will certainly disrupt the skeletal services that reach the community. Arranging right resource person for the programme, communicating with the trainees etc. do pose hurdles in efficient organisation. However, given the rating of the trainees and assessment of the utility of these programmes it may be more productive to enhance the duration and enforce discipline of the resource persons.

There is also the problem of the size of the trainees. An elderly ANM reported that she was one of the 30 trainees in a programme and was sitting in the back row, hardly could hear what was lectured and instrument to be used

was only one which she could not see at all. By the end of the day she thought she would not have missed anything by not attending it.

A shocking observation which the earlier study (Kanbargi, 1996) had found was substantiated here that only one in five ANMs knows how to insert an IUD. It is widely acknowledged now that Indian Family Planning Programme is synonym with massive female sterilisation as they account for 80-90 percent of all acceptors. The programme managers argue that if women prefer only sterilisation what can be done? This argument is hollow as the eligible women who need contracepting method are not even fully aware of the choice they have. The district level information provided in Table 2 makes it very clear. It is only female sterilisation which is universally known in rural areas. Spacing methods ignored in the family welfare programme need urgent redressal.

Section II

Review of Training Impact : Insights from the Field

This section has tried to review the impact of training programmes on day-to-day practice of the respondents. It is classified as (i) Antenatal care, (ii) Identification of high risk pregnancies - (during Ante-natal care), (iii) Midwifery services and (iv) child care. These are all part of safe motherhood and child survival programme which is being implemented in the state for few years now. As it was revealed that only 60 percent of respondents have undergone CSSM training but interaction among trained and not trained possibly will improve overall performance of all respondents.

Antenatal Care

The antenatal period is of great importance in determining future course of events for an expectant mother. During pregnancy traditional practices are followed despite some modern knowledge. It surely influences the health care seeking behaviour of women and their health status that will have a great bearing on outcome of the pregnancy. One of the most important fact that affect pregnant women's health is the suggested strict diet regime - severe restrictions on food - what to eat and what not to eat. The strong dietary taboos can further

adversely affect the nutritional status of women most of whom are already malnourished. But there are also traditional norms that put restriction on activities that may have some beneficial impact.

The knowledge about conception is widely known to all - pregnancy is recognised by the absence of periods or nausea. If the ANMs are regular in their beat and meet all the potential women they are likely to know that a particular woman has missed her period and if she had a fairly regular cycle guess that she is pregnant. The care should start from registering such women.

The recently completed RCH survey (Kanbargi et.al., 1998) considered at least 3 ANC visits to each pregnant woman during her pregnancy, 2 anti tetanus injection and supplementing nutrition by providing folic-acid tablets for 100 days as minimum package to be ensured to each pregnant woman. The survey found wide variations across districts ranging between 78 percent in Dakshina Kannada - Coorg districts to only 21 percent in Gulbarga. There could be a variety of reasons to be explored. Many researchers have questioned the efficacy of this approach in reducing maternal mortality in the states e.g. a study conducted in Kanakpura rural areas found "ante natal care provided by the government was only "contact service" and are often routine that leaves much to be desired. Weight of most of the women was not recorded, not haemoglobin estimated nor urine test done. This is in marked contrast to services provided by private practitioners. Apart from providing tetanus toxoid and iron folic acid very little is done in government health care" (Jayashree Ramakrishnan et.al., 1999).

The findings from the present study fully agree with the above observations. The questionnaire had a check list of 14 items like (i) Registering a pregnant woman which should be the beginning of the service and when is it done? When a woman informs about pregnancy or during 3 - 5 months of pregnancy? It was assumed that ANM is supposed to visit the households routinely and during her visit a woman may report that her periods are postponed or missed. However, the respondents could not distinguish the nuance and the objective behind splitting the question in two parts and it was of not much use in over 50 percent of respondents. (ii) When they start supplying IFA Tablets, (iii) When the Tetanus Toxoid injections are given, (iv) When is the blood

pressure measured, (v) When urine test is done, (vi) when is the blood test done, (vii) when is the weight taken, (viii) when is the abdominal examination done, (ix) when is the vaginal examination is done, (x) Whether diet advise is given (xi) Whether advice on breast feeding given (xi) Whether the woman is informed about possible complications in pregnancy (xii) Whether contraceptive advice is given to either post-pone next pregnancy or avoid it and lastly whether need for post-natal check-up is explained? The following chart provides the responses of ANMs/LHVs to these questions.

TABLE 7 : ANTENATAL CARE KNOWLEDGE : PERCENT

Sl No	Check list	Frequency	
		Yes	No
1	Registration	100.0	0
2	IFA tablets	100.0	0
3	TT injection	98.5	1.5
4	BP	92.0	8.0
5	Urine test	96.6	3.4
6	Blood test	93.1	6.9
7	Weight test	96.5	3.5
8	Weight taken	100.0	0
9	Abdominal check	74.7	25.3
10	Diet advised	100.0	0
11	Breast feeding advise	100.0	0
12	Pregnancy complications explained	83.9	16.1
13	Contraception advised	94.3	5.7
14	Post-natal check advised	86.0	14.0

Most of the ANMs were aware of what is ANC and its importance. But they had problems with discharging these responsibilities because of lack of instruments required like BP instruments and stethoscope, chemicals needed for testing urine etc. In addition many ANMs were not sure what is high BP that need attention? Weighing machines were provided to only 10 percent of ANMs. Only one ANM in a sub-centre (Gulbarga) showed me two weighing machines - one for just born babies and other for adults. She had another weighing machine for babies who can be placed in the panel for weighing. But this was an

exception, checking haemoglobin content and RH - ve was not possible even in Community Health Centres and PHCs.

It was clear that the knowledge of ANMs is not fully exploited in providing quality care during pregnancy. To explore further we visited two ANC camps in Gulbarga district - one held in a sub-centre and another at a CHC. The Registers maintained revealed that in CHC about 20 percent of women were examined for blood pressure and taken their weight. It was reported that large crowd about 100-150 women makes it impossible to provide the text book - prescribed services to all pregnant women.

The sub-centre clinic was held in a school - an apology for quality service. There was one table and a chair courtesy the school and the room was partitioned by a thin dirty bed sheet for examining women. Hardly there was any privacy. There was a crowd of 50 - 60 women at noon still waiting for their turn to be examined. The Lady Medical Officer was tired but committed to do her best to the pregnant women who had walked long distances to come here. They had very little choice as the ANM staying in the sub-centre village was hardly equipped with her needs. She had hired a room at the back of the school. she had to collect water from a well and go to field for her natural calls. Her husband was staying in Gulbarga.

We observed that because ANMs have not been provided with required facilities they request the pregnant women to come to a ANC camp held once in a week or once in two weeks. The Sub-Centre we observed held ANC camps every week and serves about 10 near by village women. The camp naturally gets crowded making it difficult to do all required tests for each one. A seasoned medical practioner will take the blood pressure if she has reason to doubt otherwise in such situation no. Maintaining record of blood pressure, weight gain chart that immensely help in identifying high risk pregnancies/babies and planning safe deliveries is not possible. If the ANMs who are trained for ANC and used only for distributing IFA tablets and abdominal check-up it is gross under utilisation of their talents and putting more pressure on limited resources at the Sub-Centre causing great inconvenience to women clients.

The ANC section has two very important questions that are generally ignored. One was whether the expecting mother knows when she is expecting a baby - probable date of delivery. The ANM should be able to suggest the same. We observed 82 out of 87 were aware how to estimate the date of delivery. Another crucial factor is where it will take place? It is crucial because during ANC period there will be clear indication regarding the type of delivery - whether it will be normal or complicated. Depending on the need ANM can suggest the place. If it is going to be a normal delivery certainly can take place at home. If not, the family has to arrange for a hospital delivery including the resources. But surprisingly only two in three ANMs reported that they often suggest to women where they should go for the delivery. But the rest said it is to be decided by the family based on their economic situation. Our broad impression was, as mentioned early, the ANC means 3 visits to pregnant woman, 2TT injections and IFA supply of 3 months. Though it may be considered as minimum needed, much more has to be done to do justice to CSSM programme and improve the situation of women and children.

Identification of High Risk Pregnancies

Identification of high-risk pregnancies is the first and single most important step to be followed by going to a referral hospital fully equipped to provide efficient services to ensure safe delivery.

The responsibilities of the ANMs and LHVs listed in the Training Manual prepared by State Department of Health and Family Welfare under India Population Project (IPP IX) include urine test and blood test of all pregnant women for albumin, sugar and hemoglobin contents during their home visits. It also mentions that at least 50 percent of the deliveries are to be conducted by ANMs and the rest conducted by Trained Dais are to be monitored or supervised by ANMs.

The questionnaire has prepared an exhaustive list of symptoms that indicate high-risk pregnancies. Each ANM was asked whether they know what constitute risk to pregnant woman. The list prepared included risks related to last pregnancy termination, history of systemic illness, reported complaints during

pregnancy in addition to the generally known factors like first birth or higher order births, height of the woman, status of blood pressure, etc.

The knowledge reported in the following tables is based on combined responses - some spontaneous and others received after a little probing. The responses are presented in two formats for the convenience and understanding of the reader.

TABLE 8 : IDENTIFICATION OF HIGH RISK PREGNANCIES

Sl No	Symptoms	Aware (percent)	Not aware percent
1	Age less than 18 and over 35 years	88.5	11.5
2	1 st or 4 th and higher order births	74.7	25.3
3	Current pregnancy within two years of previous	62.1	37.9
4	Height less than 4' 10"	81.6	18.4
5	Abnormal weight gain - over 10 kg. Weight gained during pregnancy	52.9	47.1
6	Sustained high blood pressure over 140/90	50.6	49.4
7	Poor weight gain 5 - 6 kg only	48.3	51.7
8	Mal presentation of foetus	78.0	22.0
9	Weak or no movement of foetus	54.0	46.0
10	Convulsions in pregnancy	70.0	30.0

It may be mentioned here that many ANMs in Tumkur District reported that for this interview they had spent two sleepless nights to go through their notes/books of training period to refresh their memory like they used to prepare for their theory examination. However, the information provided in Table 8 and 9 is a disappointing picture. It was the respondents in 50+ age who had more problems in responding as they frequently said "we have forgotten many things taught long back". There were two respondents who were deaf and posed problems for communicating effectively.

It may be noted here that most of the respondents knew that short women constitute high risk during their pregnancy but they could not define what is short? Similarly they knew that sustained high blood pressure during pregnancy carry high risks but did not know exactly what is high blood pressure. As

mentioned earlier most ANMs do not possess the instrument and those few who had it, was not in working condition.

TABLE 9 : IDENTIFICATION OF HIGH RISK PREGNANCIES

Sl. No.	History of last pregnancy	Aware Percent	Not Aware Percent
1	i) Last pregnancy terminated as		
	a) Abortion	64.4	35.6
	b) Still birth	57.5	42.5
	c) Premature birth	55.1	44.9
	ii) In complicated delivery with prolonged labour ended with		
	a) Retained placenta	55.1	44.9
	b) Sepsis	60.9	39.1
2	c) In neonatal death	16.1	71.3
	Systemic illness		
	(i) Heart disease	71.3	28.7
	(ii) Diabetics	77.0	23.0
	(iii) TB	57.0	43.0
3	(iv) Hyper tension	83.0	17.0
	Woman complains of		
	(i) Breathlessness	32.2	67.8
	(ii) Excessive tiredness	44.8	55.2
	(iii) Palpation	48.3	51.7
	(iv) Puffiness of face	35.6	64.4
	(v) Tightening of ring/bangles/chappals	62.1	37.9
	(vi) Vaginal bleeding	52.9	46.9
	(vii) Pain in abdomen	36.8	63.2
	(viii) Fevers	18.4	81.6

The responses presented in tables 8 and 9 reveal inadequate knowledge about identification of high risk pregnancies among the ANMs. The focus group discussion clearly brought out the problem of ensuring safe deliveries even in cases of identified high risk pregnancies as the required facilities were not

available even at Community Health Centres supposed to be first referral centres.

An example of a maternal death reported in one PHC area would explain the situation on ground level. The woman who delivered a baby with the help of a trained Dai and developed complications on third day. She was bleeding. The PHC kept her for a day with medication. The bleeding did not stop and she was advised to go to District hospital in the night. The family could not arrange transport and resources. Instead they took her home and she died next day. Some enquiry was conducted and the case was hushed up.

The data collected on ANC services and ability to identify high-risk pregnancies reveal that there is a long way to go to achieve effective reduction in maternal mortality and infant mortality. As noted earlier ANC means three visits to pregnant woman, 2TT injections and 100 IFA tablets. Even this minimum package of services have made considerable impact in bringing down IMR in the state, further decline depends upon improving the services of ANMs, infrastructures of PHCs and CHCs to reach the goal of IMR 30 mentioned in the policy statement of 2000.

Institutional Births

Institutional deliveries are meant to provide safe motherhood and the resultant significant reduction in maternal deaths. Wide variations were observed in them in the selected districts - from about 79 percent in Dakshina Kannada to only 21 percent in Gulbarga. ANMs in Udupi reported that many of them have not conducted a single delivery during last five years because women prefer to go to maternity homes or Government hospitals at District level. The private sector health services in Udupi - particularly the Manipal Hospital have expanded their maternity services to rural areas that has almost ensured safe delivery to any woman - poor or rich. Our visit to a remote place in Udupi where we had to cross a river to reach the village revealed that just a telephone call to the Manipal Hospitals maternity home situated at a distance of 14 kilometers will provide them not only free delivery but also free ambulance service to transport the pregnant woman to the hospital. The public-private co-operation observed in the

district is really remarkable to try in other poor districts like Gulbarga or Bellary that can improve accessibility to good care and go a long way in ameliorating the sufferings of poor women.

As a contrast to Udupi ANMs who have not conducted a single home delivery during last five years, committed ANM in Gulbarga where there is hardly any choice for most rural women reported that she conducted 120 deliveries this year of which 20 were high risk whom she referred to CHC and ensured safe births. Another ANM reported to have conducted 94 out of 99 births in her areas this year - 5 being conducted by a trained dai. These two ANMs stay in the sub-centre quarter and a visit there will convince that they were model sub-centres. The two ANMs were residents there, available any time for service, had BP instrument, weighing machines for babies and adults, providing good ANC by testing urine, keeping records of weight to know the gain, recording BP of all women and ensuring the pregnant woman at least one check-up by a lady medical officer to confirm that every thing is OK with all her clients. The outreach programme might have conceptualised such sub-centres as models. But they are exceptions now as ANMs having no housing facilities stay in a place where she can get a house on rent and naturally night deliveries can not be attended by her.

Identification of High Risk Babies (Who weighed less than 2500 gms at the time of Birth)

The data collected in Reproductive and Child Health (RCH Phase 1) survey in the selected three districts revealed that only about 7 percent of babies born in rural areas in Gulbarga district were weighed after birth and 58.3 percent of them were under weight (less than 2500 gms). On the other hand in Udupi (Dakshina Kannada) 62 percent babies born were weighed and only 13 percent of them were under weight and in Tumkur about 28 percent of babies' weight was recorded and 20 percent of them were reported weighing less than 2500 gms. These findings present a grim picture for Gulbarga and also to some extent Tumkur that certainly fare better than Gulbarga for underweight babies who carry high risk of death. Though one of the simple measure to reduce this incidence of

low weight babies is to improve the nutritional level of the mother by supplementing her diet and providing IFA tablets, the ANMs should have knowledge of the under nourished mother and the need to supply IFA tablets to them in their area.

The RCH survey reports that in Gulbarga where the proportion of low birth weight babies is highest in the study area only 48 percent of pregnant women had received IFA tablets, it was 87 percent in Tumkur and 92.3 percent in Udupi (Dakshina Kannada). It is difficult to understand why this simple low cost remedy, available is not taken seriously in Gulbarga where it is absolutely essential.

It would be interesting to note here our observations and the community perceptions about how these essential services are delivered by ANMs.

Our interaction with community leaders and women in particular provided surprising data. We met a Lady Panchayat Chairman in Gulbarga who was in her late forties, literate and was having concern for women's issues including their health. She said that the ANM stays in the village (only village she is to serve as it is quite large with 3500+ population), has a telephone at home and also keep some essential drugs for emergency. She conducts most of the deliveries in the village by charging anywhere between Rs.300 - 1000 depending upon the economic status of the family. But she never visits any home for providing services. People have to call her on phone or meet her personally if they require any service - of course at a price. The Lady Panchayat Chairperson did not know that ANM is supposed to visit all families in her jurisdiction to enquire the welfare of women, their pregnancies, children health etc. Even her husband and many others who gathered there during our focus group discussion reported ignorance and said the panchayat will issue a letter to the Medical Officer in this regard soon to ensure her services to all homes in the village. It would not be surprising in such situation that poor and scheduled caste women may not be able to avail her services free.

This was not an exceptional example in Gulbarga. In three more sub-centre areas we observed similar things. Absence of good roads and transport facility may be important hurdles to ANMs in addition to inadequate housing

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facilities. But administration both in the health department and at Zilla Parishad should try to improve the situation to ensure accessibility to health care for all. Rarely, except in one we could see a chart showing ANMs' travel programme for the week usually displayed in all PHCs. It was also surprising that many ANMs/LHVs in Gulbarga were not found wearing uniform white saree during working hours. But in Tumkur and Udupi we did not see any ANM/LHV not in the uniforms.

However, an effort was made to know respondents' abilities to identify high risk new born babies (who weigh less than 2500 gms) by check-listing some symptoms.

**TABLE 10 : IDENTIFYING HIGH RISK NEW BORN BABIES
(WEIGHING LESS THAN 2500 gms)**

Symptoms	Aware (percent)
Refusal of feed	78.2
Increased drowsiness	56.3
Difficult breathing	75.0
Cold to touch	55.0
Yellow staining of skin	62.0
Convulsions	26.4
Others	14.9

The data presented in Table 10 reveal that there is much to be desired. However, some ANMs were aware that if the baby is cold, they would keep it under 200 watt electric bulb to improve the body temperature of the baby.

Acute Respiratory Infection (ARI)

Only about half (52 percent) of the ANMs were aware about Acute Respiratory disease and 85 percent of them had knowledge of at least one symptom of ARI and also were aware that it is an important reason for high IMR.

Pneumonia

Most of the ANMs (91 percent) were aware about pneumonia and more than half of them knew one or more symptoms of pneumonia like excessive drowsiness, respiratory grunting, convulsion and inability to drink.

Diarrhoea and Dysentery

Diarrhoea, a major killer of infants and its symptoms like passage of watery stools 3 – 4 times a day was known to 92 percent of ANMs. However, there was confusion among many in distinguishing diarrhoea from dysentery, which has symptoms like blood in faeces, abdominal cramps, fever and weight loss. Only one in five respondents were aware that diarrhoea/dysentery is a major killer of infants. All respondents were aware (100 pr cent) of dehydration that follows dysentery/diarrhoea and could mention all the symptoms like restlessness, decreased skin turgor, dry mouth-tongue, sunken eyes and lethargic appearance of the baby. Management of dehydration through measures such as giving ORS or home made syrup of sugar and salt, plenty of fluids, and continue breast feeding was known to all respondents.

The strong emphasis given to the child immunisation was reflected in every respondent knowing what immunisation is to be given when. Liquid IFA, however, to be given to malnourished babies was known to only one in four, perhaps it is not supplied in the state. It was reported that children are given small IFA tablets.

Knowledge about Cold Chain

While immunisation coverage has shown remarkable improvement over time, quality of immunisation has remained a question to be answered. Is cold chain maintained to ensure the required vaccine potency? We wanted to test whether personnel who play a key role in immunising children know about cold chain?

It was revealing experience for the research team which visited a Primary Health Centre in Gulbarga district. It seems a diary is to be maintained and the temperature shown on the thermometer of the new type refrigerator in the PHC

where vaccine is stored is to be recorded by the Medical Officer. We were surprised the recording in the diary was up to date with recorded temperature, date and signature of the Medical officer but the thermometer that indicates temperature was not working for several days and not repaired. It was also clear from the observation of the diary that all the entries for the month were made the previous day. Neither the staff nor the clients who receive were aware of the importance of maintaining cold chain to ensure effective immunisation.

Compare this with what was reported by almost all respondents in Udupi. They said that the immunisation day for them will become a nightmare if power in the area was shutdown even for half an hour as mothers would object for immunising their children as there was power shut down yesterday as such what guarantee is there of the vaccine potency? With all the explanation by the ANMs about the advantages of new freezers that they have, some mothers would still prefer to go to private practitioners for immunisation. These observations, though accidental, reveal the casual approach adopted by qualified responsible authority whom the illiterate and ignorant community trusts and it deserves serious consideration in the department to ensure that there is responsible approach to immunisation. Under the circumstances it was not surprising that about 40 percent of respondents expressed their ignorance about the required temperature to maintain the vaccine potency.

Infant Feeding

There was a question to check the respondents' knowledge on exclusive breast-feeding. What does it mean? How long a baby should be exclusively breast-fed? Response of all the respondents was that babies should be breast-fed for 3 months. They also knew the advantages that exclusive breast-feeding provides more nutrition (90 percent), protects against infections (87 percent) but only 46 percent knew about its contraceptive effect. The RCH survey 1998 found that in Gulbarga babies being breast fed within two hours of birth accounted for only 9.5 percent while it was 36 percent in Tumkur and 47 percent in Dakshina Kannada District. Continuously repeated advantages of cholostrum milk that provides effective immunisation to babies is almost denied in Gulbarga. The

general opinion of ANMs was their advice during ANC and delivery does not make much sense against the strong traditional beliefs that still govern the community behaviour.

Weaning

We also enquired whether the respondents are aware about weaning? And when to start it? Each ANM reported that breast milk will be inadequate to babies growth after three months and babies will have to be introduced to some other semi solid foods like 'Ragi Sari', 'Rice Ganji', 'Bele kattu or liquified pulses' etc. which can be prepared at home with locally available food. Few of them reported that they also suggest to mothers to go for baby food available in the market. More than 70 percent of ANMs in Udupi reported that weaning food also can be purchased from market.

While the latest WHO recommendation is that exclusive breast milk should continue for 6 months and only afterwards weaning foods be introduced, all available evidence in Karnataka show that there is need to improve the understanding of mothers in rural areas about the advantages of cholostrum milk and exclusive breast feeding. Surveys have reported wide spread practice of squeezing cholostrum milk and feeding just born babies with variety of liquids like sugar syrup and castor oil with enormous health hazards. The respondents reported that during Mother's Club meetings as well as during ANC they explain all the advantages of breast-feeding including cholostrum milk however, the outcomes are poor. In this regard there is need to consider for vigorous campaign and improved IEC programme. Several babies, we saw in ANC camps in Gulbarga and Tumkur convinced about the poor health status of surviving children. They were looking thin with sunken eyes. It is possible that under-nourished mothers even though supplied IFA tablets were not regularly consuming them to derive the benefits.

General Knowledge

We perceived ANMs/LHVs as backbone of rural health delivery system. They are the link between the vast rural illiterate women and modern health care

providing PHCs. They are expected to visit every household in their area and are familiar with each of the household that make them not only a health worker but a friend, philosopher and guide to those women. During their visit they may conduct mothers' meeting to provide them important information on their own or have to answer some questions raised by their clients. Therefore their knowledge and advice carries great impact as such this study attempted to assess how familiar they are with the population problem - particularly whether they knew that India's population has crossed 100 crore mark. We asked what is India's population and gave three hints - 50 crore, 150 crore and 100 crore. Only 46 percent of them could say it is 100 crore.

It was noted earlier about the low age at marriage of females and its consequences on IMR, MMR and also fertility levels. Marriages before a girl attains 18 years of age are legally prohibited. But its impact is negligible on the marriage age. Only 79 percent of respondents were aware of legally approved age at marriage of boys and girls. One in five respondents were not aware themselves and they may not have discussed about it in the meetings of mothers. If female age at marriage continues to rise as slowly as is observed despite all efforts then what are the options left to policy makers to reduce its consequences? Or should this area be left as nothing can be done as it is parents of the bride and groom who decide the marriage and who are not bothered about the age? Marriage is certainly a complex social and economic issue. Good harvests see more marriages in any village and droughts few or no marriage and difficult to bring interventions to drastically change the pattern.

In this situation female health workers can play a very important role of motivating the young married couples to postpone the first birth by a couple of years or till the young woman attains 20 years. The focus group discussion revealed that talk about contraception will begin only after the couple has one or two children and intensive efforts begin only after 2 children. It is obvious that if sterilisation is considered as the only suitable method for the couple by the ANM, there is no alternative. But can they not advise them to use condoms or safe period or even least harmful orals that are available in the market? They are not trained to motivate couples for adopting spacing methods.

The focus group discussions also brought out some interesting problems ANMs face in the field. It was reported that the distribution of IFA tablets to pregnant woman generally starts in fifth month of pregnancy. If given soon after registration of pregnancy of the woman and the pregnancy is terminated in abortion women hold the ANM responsible for it. Because it is she who supplied IFA tablets saying that her health will improve and on the contrary she had abortion. Such news spread very fast in villages the whole village may turn out hostile and ask her not to give those tablets to any pregnant woman in their village. Similarly motivating for contraception is confronted with the problem of child survival. If the only son among the two the couple has, dies, ANM will not be forgiven for motivating them to accept sterilisation. So to play safe they said it is better a couple should have two sons and a daughter before undergoing tubectomy. It is not surprising that NFHS II found 90 percent of sterilised women had not adopted any other contraceptive method before. Distribution of Pill and Condom through public sector, therefore, constitute insignificant proportion in rural Karnataka.

This background is aptly reflected in the responses of ANMs/LHVs as 18 percent of them could not say what is safe period and explain it correctly. But 95 percent could explain what tubectomy is and how it is performed because they reported that they explain it to all potential acceptors.

Medical Termination of Pregnancy

Abortions were legalised in India in early 1970s and the number of legal abortions have increased significantly over the time as also approved places for conducting abortions. But rural women are deprived of this facility as most of the PHCs in the study area do not have the equipment or person/approved by the government to provide abortion facility to women. None of the ANMs are trained to conduct MTP and when we asked them when would they recommend MTP to women? It was disappointing that none of them had suggested any woman to go for an abortion. Looking at the clandestine abortions reported and observed by the hospital records showing sepsis/infections caused by quacks while aborting and admitted to hospitals in serious conditions, there is need to examine what

ANMs can do in rural areas. While ANMs took a moral stand and their response was very firm in reporting that they neither perform nor recommend MTP to any woman that does not reflect reality.

The job responsibilities listed by the Department of Health and Family Welfare 1999 clearly has mentioned that ANMs should identify women in need of MTP and inform them the nearest approved place for MTP to obtain an MTP. We think there is an urgent need for a debate on the issue of providing this facility to rural needy women.

The Eligible Couple Register

Eligible Couple Register the Female Health Workers are supposed to maintain and keep it up to date with all relevant information. It is a valuable document that guides in her work. It has all information she needs - how many currently married women are there by contracepting status and number of children, helps in identifying children in need of immunisation, and women in need of advice on nutrition, etc. A general complaint emerged in all our meetings was the shortage of EC Registers - some places not supplied for 7 - 8 years and ANMs have to purchase a Note pad and record the information to the best of their abilities. Non-supply or irregular supply certainly creates serious problem in compiling service statistics from Sub-Centre.

We wanted to learn from ANMs whether still they feel EC Register serves an important purpose and help them. There was a unanimous response that it is important and they should be supplied EC Register so that they will be able to improve their performance.

Mothers Meeting

The respondents also informed that they routinely conduct mothers' meetings and discuss different health issues and about nutrition. They think that these meetings will become more effective if the ANMs are provided with educational materials for use during the meeting to make the meetings more productive.

Advise to Adolescents

The needs of the adolescent girls that were ignored for long is getting attention now. There are special programmes designed for their benefit to improve their knowledge about personal hygiene and health. There were few reports of providing Tetanus Toxide injection to these adolescent girls. What was interesting to learn from many ANMs was that often in mothers meeting some adolescent girls also participate and when the topic of contraception / pregnancy is to be discussed they are asked to go out as they need not learn about contraception because educating these unmarried girls in Family Planning methods because of the fear of using them before marriage. Given the sea change that is being realised through recent research on changing sexuality in the society and the AIDS threat becoming more and more serious there is need to think about what should be the policy for these girls. Most of whom are illiterate and ignorant of many vital issues concerned with their own person. If they are educated about contraception will that enhance its use after they get married?

Summary and Conclusions

The short term intensive study was carried out in three districts of Karnataka State that widely differ in health and demographic indicators. The main objective of the study was to assess the various training programmes the grass root level female health workers (ANMs/LHVs) have undergone, extent of their utilisation by them in their day-to-day work. The study went beyond the stated main objectives to examine whether providing training per se will improve health care services as its effective exploitation is related with a host of other factors like infrastructure, equipment and team spirit at PHC level from where these services are organised, supervised and monitored.

The focus of the study was confined to those training programmes that were designed to improve the health status of women and children – more specifically in reducing further IMR and MMR. For this intensive study selected 3 districts – Udupi, Tumkur and Gulbarga. From these three districts 8 Taluks and 22 Primary Health Centres were selected. All Female Health Workers

(ANMs/LHVs) numbering 87 of these centres were administered a standard questionnaire that was specially constructed to check their skills required in their work. The 87 respondents were covering a population of 2, 61, 155.

All respondents had successfully completed the foundation course - 18 months and few had 2 years training programme. The gap between the completion of course and joining the service for many was large and few exceptional cases it was 4 – 5 years.

The general impression of the respondents regarding their training that some had completed 30 years back was that there was inadequate attention to practical hospital training and training in field work. An indication of this was the reported 'shaking of hands' during the first delivery conducted by most of them. There were one-or-two exception to this general observation. An ANM in Gulbarga mentioned she had the best opportunity of conducting 24 deliveries during her training period under the able supervision and guidance of a gynecologist. It was suggested that training programmes should be need-based and practical in real life situation and not just lecturing with lot of information.

There was long gap between Foundation course and the next most important training programme related to maternal and child health viz. CSSM training. The findings show that still 40 percent of ANMs have to undergo this programme that has great relevance to reduce further IMR and MMR.

It was shocking to find that most of the ANMs are not trained to insert IUD. Policy studies have repeatedly highlighted the urgent need to enhance use of spacing methods particularly among rural women, as it will have direct good impact on the health of women and children. This needs serious attention.

Similarly ANMs/LHVs need to be more sympathetic to women's need for Abortion. Whether they can be trained to perform medical termination of pregnancies is a technical question to be decided by experts, we strongly recommend that at least MTP service be made available at PHC level and ANMs/LHVs should be trained in the legal aspect of MTP and when they can recommend it to needy women.

In addition to CSSM, a host of training programmes have been conducted for the respondents. A general observation is that the short term training

programmes of one or two days have been rated as not very satisfactory by the respondents. There was a strong suggestion of all respondents in Tumkur and Gulbarga that Continuing Education programme for a week should be a regular feature to update their skills and knowledge of maternity and child health. This programme should be holistic and may cover other relevant contemporary health problems in the state / district.

Identifying high risk Pregnancies

The findings suggest that there is a need to have as suggested above, one week Continuing Education programme to enhance the knowledge and skills of ANMs/LHVs of pregnancy management. Except in Udupi/Dakshina Kannada and Kodagu districts where Institutional deliveries have become a rule in all other districts where domiciliary deliveries dominate, the improvement of the knowledge of ANMs with intensive training should be given serious attention. ANMs/LHVs must have knowledge of measuring blood pressure, testing urine for albumin and sugar and keeping these records for all pregnant women. These services should be provided to women in their homes by ANMs in addition to TT injections and IFA tablets. It should be followed by blood test of each woman for haemoglobin content at PHC level. It may be noted that we had trained Field Investigators of NFHS II Survey to measure haemoglobin of all women in the sample at their home in each village. It was possible because very simple to use technology was made available from USAID. It should not be difficult to obtain this technology by the state government for use of ANMs/LHVs. The time taken for the test is very little-just 1 minute per woman at their door step. Unless minimum package of services are ensured to all pregnant women and each high risk pregnancy is identified and taken to nearest referral unit for safe delivery, MMR will continue to be very high.

Identifying high risk babies also needs serious attention. Knowledge of Acute Respiratory Infection is very poor among the respondents. NFHS II reports that about 34 percent of children were suffering from ARI in Karnataka indicating the serious nature of the illness and its consequences. The present study found that ANMs were confused when asked to distinguish between the

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symptoms of diarrhea and dysentery. As 15 per cent of children in the state were found to be suffering from these illness improving the knowledge of ANMs and LHV's in identification of these illness and ARI is to be given immediate attention. It was, however, satisfying that Oral Rehydration Therapy (ORT) is universally known not only to ANMs but also to mothers.

Immunisation coverage in the state has shown gradual improvement as revealed in the service statistics. We came across a report in Gulbarga that a baby afflicted by polio in a village was living next door to the sub-centre. Looking at the crowd in Immunisation Centres with several agencies participating, a child may miss immunisation. ANMs were found to be well versed with immunisation process and were confident that all children in their area are protected. While in Udupi Rotary, Lions, Womens Organisations, College Students and many enlightened women participated in pulse polio in a big way even in rural areas such support in Tumkur and Gulbarga was more concentrated only in District towns.

Respondent's knowledge about benefits of exclusive breast feeding and weaning was appreciably good and needs periodic updating. Their understanding of India's population and legally approved age at marriage for males and females was found poor that needs to be up-dated.

The most glaring lacunae reported by ANMs and LHV's in their training is lack of communication skills and inadequate attention to it in any of their training. Simple observation is that to combat with strong traditional practices having serious adverse impact on women and children like squeezing of cholostrum milk needs intensive campaign. It would be effective only when ANMs can play an important important role. Similarly introduction of spacing methods to young married couples would be facilitated greatly if ANMs are properly trained to convince the young village couple of its advantages.

Most crucial issue to be considered here is that training, upgrading skills and information becomes inevitable to improve overall health status measured in several ways. The goals set in the health sector can be achieved when such relevant training programmes bring in qualitative changes in the services provided to clients. If all that is told in training programme is difficult to put in

practice because of lack or absence of infrastructure, equipment and other supplies the purpose of training cannot be served.

It was observed that vast expansion of health care services - personnel during the decade is not followed by adequate care and required resources. The quick expansion perhaps created a problem of finding professionally trained personnel. A look at the staff position at district level is surprising if not shocking. If health care service delivery is ensured with or without these large number of vacancies, it is in itself an indicator of quality care.

At policy level, it is desirable to think of a district or a group of districts for intervention. For example in Gulbarga and Tumkur and such other districts there is need for greater attention to improve the management of pregnancies and their outcomes which may need more resources like improving PHC/Sub-Centre infrastructure, equipment to ANMs such as BP instrument, chemicals to test urine, haemoglobin/blood test etc. Where as in Udupi, Dakshina Kannada, Coorg with good adequate support from private sector this problem is not there. But AIDS is looming large in these districts with large out migration of males and females. We heard reports of AIDS deaths caused in every village we visited with documentary evidence. All the deaths had occurred to the return migrants and it seemed as if they all came home only to die.

At state level there is a uniform policy of resource allocation for health sector. If some districts perform poor as indicated by several indicators it would be necessary to ensure that administration in these districts are pulled up. The poor perception of people regarding the public health care system in health poor districts needs serious attention. Precious public resources deserve more productive use. The backward nature of some districts is known for long for over four decades and these districts have remained at the bottom even now. Unless some fundamental change is brought in the administration for improvement they will continue to be at the bottom.

